

IN THE SPECIFICATION:

Please replace the indicated paragraphs with the attached clean version of the replacement paragraphs attached hereto.

Please see a marked-up version of the amended specification paragraphs attached hereto to aid the Examiner in identification of changes.

IN THE CLAIMS:

Please replace Claims 1, 9, and 14 with the attached clean version of replacement Claims 1, 9, and 14.

Please see a marked-up version of the amended claims attached hereto to aid the Examiner in identification of changes.



DOCKET: CU-1962

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED

JUL 30 2001

TECHNOLOGY CENTER 2800

APPLICANT: In Cheol PARK et al)
SERIAL NO: 09/345,270) Group Art Unit: 2871
FILED: June 30, 1999) Examiner: Q. VU
TITLE: REFLECTIVE LIQUID CRYSTAL DISPLAY OF HIGH APERTURE
RATIO, HIGH TRANSMITTANCE AND WIDE VIEWING ANGLE

THE ASSISTANT COMMISSIONER FOR PATENTS
Washington, D.C. 20231

CLEAN VERSION OF AMENDED SPECIFICATION PARAGRAPHS

Page 5, second paragraph to Page 7, first partial paragraph

To accomplish the foregoing object, the present invention provides a
reflective LCD comprising:

- a lower substrate and an upper substrate opposed with a selected distance;
- a liquid crystal layer sandwiched between the lower and the upper substrates and comprising a plurality of liquid crystal molecules;
- a gate bus line and a data bus line formed on the lower substrate to define a pixel;
- a counter electrode and a pixel electrode formed at an inner surface of the lower substrate wherein both electrodes are formed with a selected distance and width so that most of the liquid crystal molecules in upper portions of those electrodes are sufficiently driven by forming a fringe field between said counter and pixel electrodes;
- a thin film transistor provided adjacent to an intersection of the gate bus line and the data bus line and transmitting a signal of the data bus line into the pixel electrode when the gate bus line is selected;
- a polarizing plate disposed at an outer surface of the upper substrate;
- a reflecting plate disposed at an outer surface of the lower substrate; and
- a quarter wave plate sandwiched between the reflecting plate and the lower substrate, or between the polarizing plate and the upper substrate,

wherein both counter and pixel electrodes are made of a transparent conductor,

wherein a distance between the upper and lower substrates is greater in length than the distance between the counter and pixel electrodes.

The present invention further provides a reflective LCD comprising:

a lower substrate and an upper substrate opposed with a selected distance;

a liquid crystal layer sandwiched between the lower and the upper substrates and comprising a plurality of liquid crystal molecules;

a gate bus line and a data bus line formed on the lower substrate to define a pixel;

a counter electrode formed at each pixel of the lower substrate, transmitted with the common signal and having a plurality of branches diverged in parallel with the data bus line and at least a bar for connecting the branches, wherein the respective branches have a first width and they are spaced with a second distance;

a pixel electrode having a plurality of strips formed between the respective branches of the counter electrode, having a second width, and spaced apart by a third distance, and at least a bar for connecting the strips;

a thin film transistor provided adjacent to an intersection of the gate bus line and the data bus line and transmitting a signal of the data bus line into the pixel electrode when the gate bus line is selected;

a polarizing plate disposed at an outer surface of the upper substrate;

a reflecting plate disposed at an outer surface of the lower substrate; and

a quarter wave plate sandwiched between the reflecting plate and the lower substrate, or between the polarizing plate and the upper substrate,

wherein both counter and pixel electrodes are made of a transparent conductor,

wherein a distance between the upper and lower substrates is greater in length than the distance between the branch of the counter electrode and the strip of the pixel electrode,

wherein the first and second widths are set such that the liquid crystal molecules in upper portions of the branch of the counter electrode and the strip of

the pixel electrode are aligned by the electric field between adjacent branches and strips.

Moreover, the present invention provides a reflective LCD comprising:

a lower substrate and an upper substrate opposed with a selected distance;

a liquid crystal layer sandwiched between the lower and the upper substrates and comprising a plurality of liquid crystal molecules;

a gate bus line and a data bus line formed on the lower substrate to define a pixel;

a counter electrode formed at each pixel of the lower substrate, transmitted with a common signal and shaped of a plate;

a pixel electrode formed over the counter electrode and having a plurality of strips, wherein the strip has a selected width and spaced from each other by a selected distance;

a thin film transistor provided adjacent to an intersection of the gate bus line and the data bus line and transmitting a signal of the data bus line into the pixel electrode when the gate bus line is selected;

a polarizing plate disposed at an outer surface of the upper substrate;

a reflecting plate disposed at an outer surface of the lower substrate; and

a quarter wave plate sandwiched between the reflecting plate and the lower substrate, or between the polarizing plate and the upper substrate,

wherein both counter and pixel electrodes are made of a transparent conductor,

wherein a distance between the upper and lower substrates is greater in length than the distance between the counter electrode and the pixel electrode,

wherein a width of the strip of the pixel electrode and a width of the counter electrode disposed between the strips are set such that the liquid crystal molecules in upper portions of the counter electrode disposed between the strips and the strip of the pixel electrode are all aligned by the electric field between adjacent branches and strips.